

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

1/23

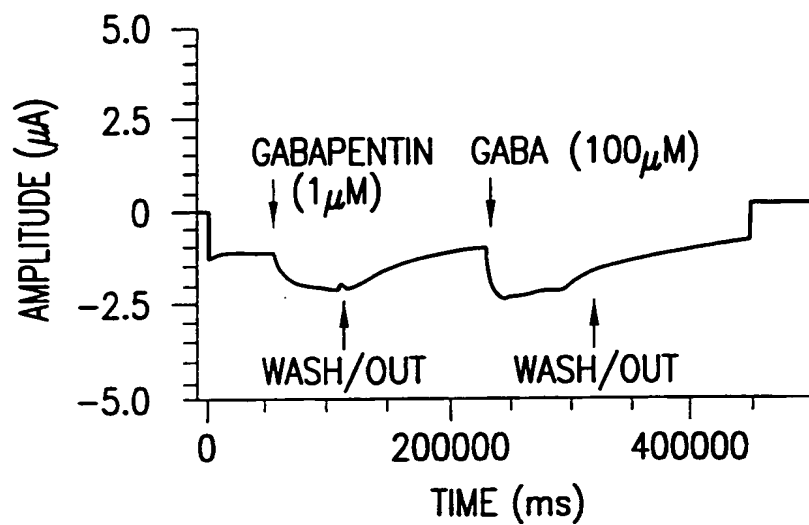


FIG. 1A

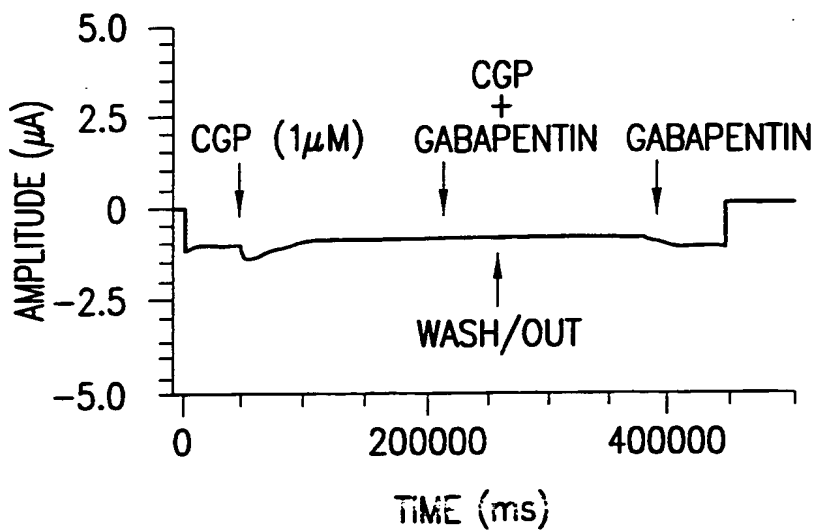


FIG. 1B

2/23

```
1 CCGCCCTCCC CCGGCCGAGC TCCAGGGCTG CCGCCTAGCA GCTCCCGGCG
51 GGAGAGCGGT TCAGAGCTCG CTCCCACCCC TTCCCGGCGT GATTGATCCG
101 TCACGGGCGC CTCCGCTGCC GCCGCCGCCG CCGCGGCCGT TCTGAGCCGA
151 GCCGGAACCC TAGCCCGAGA CGGAGCCGGG GCCCGGGCCG GCGCCATTGC
201 GCGGGCGCCG CGGGAAGACC TTGGCGCGGG GCGGCGGGCC GGGCCAGGCC
251 ATGCGGGCCG AGTGAGCCGG CGCCCGCAGC CCGCGGCGCG GCATGGCTTC
301 CCCGCGGAGC TCCGGGCAGC CCGGGCCGCC GCCGCCGCCG CCACCGCCGC
351 CCGCGCGCCT GCTACTGCTA CTGCTGCTGC CGCTGCTGCT GCCTCTGGCG
401 CCCGGGGCCT GGGGCTGGGC GCGGGGCGCC CCCC GGCCGC CGCCAGCAG
451 CCCGCCGCTC TCCATCATGG GCCTCATGCC GCTCACCAAG GAGGTGGCCA
501 AGGGCAGCAT CGGGCGCGGT GTGCTCCCCG CCGTGGAAct GGCCATCGAG
551 CAGATCCGCA ACGAGTCACT CCTGCGCCCC TACTTCCTCG ACCTGCGGCT
601 CTATGACACG GAGTGCGACA ACGAAAAGG GTTGAAAGCC TTCTACGATG
651 CAATAAAATA CGGGCCGAAC CACTTGATGG TGT TTGGAGG CGTCTGTCCA
701 TCCGTCACAT CCATCATTGC AGAGTCCCTC CAAGGCTGGA ATCTGGTGCA
751 GCTTTCTTTT GCTGCAACCA CGCCTGTTCT AGCCGATAAG AAAAAATACC
801 CTTATTTCTT TCGGACCGTC CCATCAGACA ATGCGGTGAA TCCAGCCATT
851 CTGAAGTTGC TCAAGCACTA CCAGTGGAAG CGCGTGGGCA CGCTGACGCA
901 AGACGTTGAG AGGTTCTCTG AGGTGCGGAA TGACCTGACT GGAGTTCTGT
951 ATGGCGAGGA CATTGAGATT TCAGACACCG AGAGCTTCTC CAACGATCCC
1001 TGTACCAGTG TCAAAAAGCT GAAGGGGAAT GATGTGCGGA TCATCCTTGG
1051 CCAGTTTGAC CAGAATATGG CAGCAAAAGT GTTCTGTTGT GCATACGAGG
1101 AGAACATGTA TGGTAGTAAA TATCAGTGGA TCATTCCGGG CTGGTACGAG
1151 CTTCTTGGT GGGAGCAGGT GCACACGGAA GCCAACTCAT CCCGCTGCCT
1201 CCGGAAGAAT CTGCTTGCTG CCATGGAGGG CTACATTGGC GTGGATTTTCG
1251 AGCCCCTGAG CTCCAAGCAG ATCAAGACCA TCTCAGGAAA GACTCCACAG
1301 CAGTATGAGA GAGAGTACAA CAACAAGCGG TCAGGCGTGG GGCCAGCAA
1351 GTTCCACGGG TACGCCTACG ATGGCATCTG GGT CATCGCC AAGACACTGC
1401 AGAGGGCCAT GGAGACACTG CATGCCAGCA GCCGGCACCA GCGGATCCAG
1451 GACTTCAACT ACACGGACCA CACGCTGGGC AGGATCATCC TCAATGCCAT
1501 GAACGAGACC AACTTCTTCG GGGTCACGGG TCAAGTTGTA TTCCGGAATG
1551 GGGAGAGAAT GGGGACCATT AAATTTACTC AATTTCAAGA CAGCAGGGAG
1601 GTGAAGGTGG GAGAGTACAA CGCTGTGGCC GACACACTGG AGATCATCAA
1651 TGACACCATC AGGTTCCAAG GATCCGAACC ACCAAAAGAC AAGACCATCA
1701 TCCTGGAGCA GCTGCGGAAG ATCTCCCTAC CTCTCTACAG CATCCTCTCT
1751 GCCCTACCA TCCTCGGGAT GATCATGGCC AGTGCTTTTC TCTTCTTCAA
1801 CATCAAGAAC CGGAATCAGA AGCTCATAAA GATGTCGAGT CCATACATGA
1851 ACAACCTTAT CATCCTTGGA GGGATGCTCT CCTATGCTTC CATATTTCTC
```

FIG. 2A

SUBSTITUTE SHEET (RULE 26)

3/23

1901 TTTGGCCTTG ATGGATCCTT TGTCTCTGAA AAGACCTTTG AAACACTTTG  
1951 CACCGTCAGG ACCTGGATTC TCACCGTGGG CTACACGACC GCTTTTGGGG  
2001 CCATGTTTGC AAAGACCTGG AGAGTCCACG CCATCTTCAA AAATGTGAAA  
2051 ATGAAGAAGA AGATCATCAA GGACCAGAAA CTGCTTGTGA TCGTGGGGGG  
2101 CATGCTGCTG ATCGACCTGT GTATCCTGAT CTGCTGGCAG GCTGTGGACC  
2151 CCCTGCGAAG GACAGTGGAG AAGTACAGCA TGGAGCCGGA CCCAGCAGGA  
2201 CGGGATATCT CCATCCGCCC TCTCCTGGAG CACTGTGAGA ACACCCATAT  
2251 GACCATCTGG CTTGGCATCG TCTATGCCTA CAAGGGACTT CTCATGTTGT  
2301 TCGGTTGTTT CTTAGCTTGG GAGACCCGCA ACGTCAGCAT CCCCCTACTC  
2351 AACGACAGCA AGTACATCGG GATGAGTGTC TACAACGTGG GGATCATGTG  
2401 CATCATCGGG GCCGCTGTCT CCTTCCTGAC CCGGGACCAG CCCAATGTGC  
2451 AGTTCTGCAT CGTGGCTCTG GTCATCATCT TCTGCAGCAC CATACCCTC  
2501 TGCCTGGTAT TCGTGCCGAA GCTCATCACC CTGAGAACAA ACCCAGATGC  
2551 AGCAACGCAG AACAGGCGAT TCCAGTTCAC TCAGAATCAG AAGAAAGAAG  
2601 ATTCTAAAAC GTCCACCTCG GTCACCAGTG TGAACCAAGC CAGCACATCC  
2651 CGCCTGGAGG GCCTACAGTC AGAAAACCAT CGCCTGCGAA TGAAGATCAC  
2701 AGAGCTGGAT AAAGACTTGG AAGAGGTCAC CATGCAGCTG CAGGACACAC  
2751 CAGAAAAGAC CACCTACATT AAACAGAACC ACTACCAAGA GCTCAATGAC  
2801 ATCCTCAACC TGGGAAACTT CACTGAGAGC ACAGATGGAG GAAAGGCCAT  
2851 TTTAAAAAAT CACCTCGATC AAAATCCCCA GCTACAGTGG AACACAACAG  
2901 AGCCCTCTCG AACATGCAAA GATCCTATAG AAGATATAAA CTCTCCAGAA  
2951 CACATCCAGC GTCGGCTGTC CCTCCAGCTC CCCATCCTCC ACCACGCCTA  
3001 CCTCCCATCC ATCGGAGGCG TGGACGCCAG CTGTGTCAGC CCCTGCGTCA  
3051 GCCCCACCGC CAGCCCCCGC CACAGACATG TGCCACCCTC CTTCCGAGTC  
3101 ATGGTCTCGG GCCTGTAAGG GTGGGGGGCC TGGGCCCCGG GCCTCCCCCG  
3151 TGACAGAACC ACACTGGGCA GAGGGGTCTG CTGCAGAAAC ACTGTGCGCT  
3201 CTGGCTGCGG AGAAGCTGGG CACCATGGCT GGCTCTCAG GACCACTCGG  
3251 ATGGCACTCA GGTGGACAGG ACGGGGCAGG GGGAGACTTG GCACCTGACC  
3301 TCGAGCCTTA TTTGTGAAGT CCTTATTTCT TCACAAAGAA GAGGAACGGA  
3351 AATGGGACGT CTTCTTAAC ATCTGCAAAC AAGGAGGCGC TGGGATATCR  
3401 AATTCCACCA CACTGGCGGC CCGCGCTTGS TCSTAATCAT GGTCATAACT  
3451 GTTTCCTGTG TTGAAATTGT TATCCGCTCC

FIG.2B

4/23

1 MASPRSSGQP GPPPPPPPP ARLLLLLLLP LLLPLAPGAW GWARGAPRPP  
51 PSSPPLSIMG LMPLTKEVAK GSIGRGVLPA VELAIEQIRN ESLLRPYFLD  
101 LRLYDTECDN AKGLKAFYDA IKYGNHLMV FGGVCPSVTS IIAESLQGWN  
151 LVQLSFAATT PVLADKKKYP YFFRTVPSDN AVNPAILKLL KHYQWKRVGT  
201 LTQDVQRFSE VRNDLTGVLY GEDIEISDTE SFSNDPCTSV KKLKGNDVRI  
251 ILGQFDQNMA AKVFCCAYEE NMYGSKYQWI IPGWYEPSWW EQVHTEANSS  
301 RCLRKNLLAA MEGYIGVDFE PLSSKQIKTI SGKTPQQYER EYNNKRSVG  
351 PSKFHGYAYD GIWVIAKTLQ RAMETLHASS RHQRIQDFNY TDHTLGRIIL  
401 NAMNETNFFG VTGQVVFRNG ERMGTIKFTQ FQDSREVKVG EYNAVADTLE  
451 IINDTIRFQG SEPPKDKTII LEQLRKISLP LYSILSALTI LGMIMASAF  
501 FFNIKNRNQK LIKMSSPYMN NLIILGGMLS YASIFLFLD GSFVSEKTFE  
551 TLCTVRTWIL TVGYTTAFGA MFAKTWRVHA IFKNVKMKKK IIKDQKLLVI  
601 VGGMLLIDLC ILICWQAVDP LRRTVEKYSM EPDPAGRDIS IRPLLEHCEN  
651 THMTIWLGIY YAYKGLLMLF GCFLAWETRN VSIPALNSDK YIGMSVYNVG  
701 IMCIIGAASV FLTRDQPNVQ FCIVALVIIF CSTITLCLVF VPKLITLRTN  
751 PDAATQNRFF QFTQNQKKED SKTSTSVTSV NQASTSRLEG LQSENHRLRM  
801 KITELDKDLE EVTMQLQDTP EKTYYIKQNH YQELNDILNL GNFTSTDDGG  
851 KAILKNHLDQ NPQLQWNTTE PSRTCKDPIE DINSPEHIQR RLSLQLPILH  
901 HAYLPSIGGV DASCVSPCVS PTASPRHRHV PPSFRVMVSG L

FIG.3

5/23

```

1  atgctgctgc tgctgcttct gcttctcttc ctccgcccc tgggcgctgg cggggctcag
61  acccccaacg tcacctcgga aggttgccag attatacatc cgccctggga aggtggcatc
121 aggtaccgtg gcttgattcg cgaccaggtg aaggccatca atttcctgcc tgtggactat
181 gagattgaat atgtgtgccg gggcgaacgc gaggtggtgg ggcccaaggt gcgcaagtgc
241 ctggccaacg gctcctggac ggatatggac acaccagtc gctgtgtccg aatctgctcc
301 aagtcttatt tgaccctgga aaatgggaag gttttcctga cgggtgggga cctcccagct
361 ctggatggag cccgggtgga tttccgatgt gaccctgact tccatctggt gggcagctcc
421 cggagcatct gtagtcaggg ccagtggagc accccaagc cccactgcca ggtgaatcga
481 acgccacact cagaacggcg tgcagtatac atcggggcgc tgtttcccat gagcgggggc
541 tggccggggg gccaggcctg ccagcctgcg gtggagatgg cgctggagga cgtaaacagc
601 cgcagagaca tcctgccgga ctacgagctc aagcttatcc accacgacag caagtgcgac
661 ccagggcaag ccaccaagta cttgtatgaa ctactctaca acgaccccat caagatcatc
721 ctcattgccg gctgcagctc tgtgtccaca ctggtagccg aggctgcccg gatgtggaac
781 cttattgtgc tctcatatgg ctccagctca ccagccttgt caaacgaca gcggtttcca
841 acgttctttc ggacacatcc atccgccaca ctccacaatc ccaccgggt gaaactcttc
901 gaaaagtggg gctggaagaa gattgccacc atccagcaga ctaccgaggt cttcacctca
961 aactggatg acctggagga gcgagtgaag gaggtggga ttgagatcac ttttcgacag
1021 agtttcttct cagatccagc tgtgcctgtt aaaaacctga agcgtcaaga tgctcgaatc
1081 atcgtgggac ttttctatga gaccgaagcc cggaaagtgt tttgtgaggt ctataaggaa
1141 cggctctttg ggaagaagta tgtctggttt ctcattcggt ggtatgctga caactggttc
1201 aaaacctatg acccgtcaat caattgtaca gtagaagaga tgactgaggc ggtggagggc
1261 catatcacca cggagattgt catgctgaac cctgccaaac cccgaagcat ttccaacatg
1321 acatcacagg aatttgtgga gaaactaacc aagcggctga aaagacacc tgaggagact
1381 ggaggcttcc aggaggcacc actggcctat gatgctatgt gggccttggc tttggccttg
1441 aacaagacct ctggaggagg tggccgttca ggagtgcgcc tggaggactt taactacaac
1501 aaccagacca ttacagacca aatctaccgg gccatgaact cctcctcctt tgagggtgtt
1561 tctggccacg tggcttttga tgccagcggc tcccgatgg catggacgct tatcgagcag
1621 ctacagggcg gcagctacaa gaagatcggc tactacgaca gcaccaagga tgatctttcc
1681 tgggtccaaa cagacaagtg gatcggaggg tctccccag ccgaccagac cttggtcatc
1741 aagacattcc gtttcctgtc acagaaactc tttatctccg tctcagttct ctccagcctg
1801 ggcattgttc ttgctgttgt ctgtctgtcc tttaacatct acaactccca cgctcgttat
1861 atccagaatt cccagcccaa cctgaacaat ctgactgctg tgggctgctc actggcactg
1921 gctgttgtct tccctctcgg gctggatggt taccacatag ggagaagcca gttcccgttt
1981 gtctgccagg cccgcctttg gctcttgggc ttgggcttta gtctgggcta tggctctatg
2041 ttcaccaaga tctggtgggt ccacacagtc ttcacgaaga aggaggagaa gaaggagtgg
2101 aggaagacc tagagccctg gaaactctat gccactgtgg gcctgctggt gggcatggat
2161 gtcctgactc ttgccatctg gcagattgtg gacccttgc accgaacat tgagactttt

```

FIG. 4A

SUBSTITUTE SHEET (RULE 26)

6/23

2221 gccaaaggagg aaccaaagga agacatcgat gtctccattc tgccccagtt ggagcactgc  
2281 agctccaaga agatgaatac gtggcttggc attttctatg gttacaaggg gctgctgctg  
2341 ctgctgggaa tctttcttgc ttacgaaacc aagagcgtgt ccactgaaaa gatcaatgac  
2401 cacagggccg tgggcatggc tatctacaat gtcgcggtcc tgtgtctcat cactgctcct  
2461 gtgaccatga tcctttccag tcagcaggac gcagcctttg cctttgcctc tctggccatc  
2521 gtgttctctt cctacatcac tctggttgtg ctctttgtgc ccaagatgcg caggctgatc  
2581 acccgagggg aatggcagtc tgaaacgcag gacaccatga aaacaggatc atccaccaac  
2641 aacaacgagg aagagaagtc ccgactgttg gagaaggaaa accgagaact ggaaaagatc  
2701 atcgctgaga aagaggagcg cgtctctgaa ctgcgccatc agctccagtc tcggcagcaa  
2761 ctccgctcac ggcgccaccc cccaacaccc ccagatccct ctgggggcct tcccagggga  
2821 ccctctgagc cccctgaccg gcttagctgt gatgggagtc gagtacattt gctttacaag  
2881 tga

FIG.4B

7/23

MLLLLLLLLLFLRPLGAGGAQTPNVTSEGCQIIHPPWEGGIRYRGLIRDQVKAINFLPVDY  
EIEYVCRGEREVVGPKVRKCLANGSWTMDTPSRCVRICKSYLTLENGKVFLTGGDLPA  
LDGARVDFRCDPDFHLVGSSRSICSGQWSTPKPHCQVNRTPHSERRAVYIGALFPMSSG  
WPGGQACQPAVEMALEDVNSRRDILPDYELKLIHDSKCDPGQATKYLYELLYNDPIKII  
LMPGCSSVSTLVAEAARMWNLIVLSYGSSSPALSNRQRFPTFFRTHPSATLHNPTRVKLF  
EKWGWKKIATIQQTTEVFTSTLDDLEERVKEAGIEITFRQSFFSDPAVPVKNLKRQDARI  
IVGLFYETEARVCFEYKERLFGKKYVWFLIGWYADNWFKTYDPSINCTVEEMTEAVEG  
HITTEIVMLNPANTRISNMTSQEFVEKLTARKLRHPEETGGFQEAPLAYDAIWALALAL  
NKTSGGGGRSGVRLEDNFYNNQTTTDDQIYRAMNSSFEGVSGHVVDASGSRMAWTLEQ  
LQGGSYKKIGYYDSTKDDLWSKTDKWIGGSPPADQTLVIKTRFLSQKLFISVSVLSSL  
GIVLAVVCLSFNIYNHARYIQNSQPNLNNLTAVGCSLALAVVPLGLDGYHIGRSQFPF  
VCQARLWLLGLGFSGLGYGSMFTKIWWVHTVFTKKEEKKWRKTLEPWKLYATVGLLVGM  
DLTALAIWQIVDPLHRTIETFAKEPKEDIDVSILPQLEHCSSKKMNTWLGIFYGYKGLLL  
LLGIFLAYETKSVSTEKINDHRAVGMAIYNVAVLCLITAPVTMILSSQQDAAFASLAI  
VFSSYITLVVLFVPMRRLITRGEWQSETQDTMKTGSSTNNNEEEKSRLLLEKENRELEKI  
IAEKEERVSELRHQLQSRQQLRSRRHPPTPPDPSGGLPRGPSEPPDRLSCDGSRVHLLYK

FIG.5

MLLLLLLAPLFLRPPGAGGAHTPNATSEGCQIIHPPWEGGIRYRGLTRDQV  
KAINFLPVDYIEYVCRGEREVVGPKVRKCLANGSWTMDTPSRCVRICK  
KSYLTLENGKVFLTGGDLPALDGARADFRCDPDFHLVGSSRSICSGQWST  
PKPHCQVNRTPHSERRAVYIGALFPMSSGWPGGQACQPAVEMALEDVNS  
RRDILPDYELKLIHDSKCDPGQATKYLYELLYNDPIKII LMPGCSSVSTLV  
AEAARMWNLIVLSYGSSSPALSNRQRFPTFFRTHPSATLHNPTRVKLF  
EKWGWKKIATIQQTTEVFTSTLDDLEERVKEAGIEITFRQSFFSDPAVPVKNLKRQ  
DARIIVGLFYETEARVCFEYKERLFGKKYVWFLIGWYADNWFKIYDPS  
INCTVDEMTEAVEGHITTEIVMLNPANTRISNMTSQEFVEKLTARKLRHPE  
ETGGFQEAPLAYDAIWALALALNKTSGGGGRSGVRLEDNFYNNQTTTDDQI  
YRAMNSSFEGVSGHVVDASGSRMAWTLEQLQGGSYKKIGYYDSTKDD  
LSKTDKWIGGSPPADQTLVIKTRFLSQKLFISVSVLSSLGIVLAVVCLSF  
NIYNHVRARYIQNSQPNLNNLTAVGCSLALAAVPLGLDGYHIGRNQFPFV  
CQARLWLLGLGFSGLGYGSMFTKIWWVHTVFTKKEEKKWRKTLEPWKLY  
ATVGLLVGMVDLTALAIWQIVDPLHRTIETFAKEPKEDIDVSILPQLEHCSS  
RKMNTWLGIFYGYKGLLLLLLGIFLAYETKSVSTEKINDHRAVGMAIYNVA  
VLCLITAPVTMILSSQQDAAFASLAI VFSSYITLVVLFVPMRRLITRGE  
WQSEAQDTMKTGSSTNNNEEEKSRLLLEKENRELEKIIAEKEERVSELRHQLQ  
SRQQLRSRRHPPTPPEPSGGLPRGPPEPPDRLSCDGSRVHLLYK

FIG.6A



8/23

```

1  atgttgctgc tgctgctact ggcgccactc ttcctccgcc ccccgggcgc gggcggggcg
61  cataccccca acgccacctc agaagggtgc cagatcatac acccgccctg ggaagggggc
121 atcaggtacc ggggcctgac tcgggaccag gtgaaggcta tcaacttcct gccagtggac
181 tatgagattg agtatgtgtg ccggggggag cgcgagggtg tggggcccaa ggtccgcaag
241 tgcctggcca acggctcctg gacagatatg gacacacca gccgctgtgt ccgaatctgc
301 tccaagtctt atttgaccct ggaaaatggg aaggttttcc tgacgggtg gacctccca
361 gctctggacg gagcccgggc ggatttcggg tgtgaccccg acttccatct ggtgggcagc
421 tcccggagca tctgtagtca gggccagtgg agcaccacca agccccactg ccaggtgaat
481 cgaacgccac actcagaacg gcgcgcagtg tacatcgggg cactgtttcc catgagcggg
541 ggctggccag ggggccaggc ctgccagccc gcggtggaga tggcgtgga ggacgtgaat
601 agccgcaggg acatcctgcc ggactatgag ctcaagctca tccaccacga cagcaagtgt
661 gatccaggcc aagccaccaa gtacctatat gagctgctct acaacgacct tatcaagatc
721 atccttatgc ctggctgcag ctctgtctcc acgctggtgg ctgaggctgc taggatgtgg
781 aacctcattg tgctttccta tggctccagc tcaccagccc tgtcaaaccg gcagcgtttc
841 cccactttct tccgaacgca cccatcagcc acactccaca accctaccgg cgtgaaactc
901 tttgaaaagt ggggctggaa gaagattgct accatccagc agaccactga ggtcttcact
961 tcgactctgg acgacctgga ggaacgagtg aaggaggctg gaattgagat tactttccgc
1021 cagagtttct tctcagatcc agctgtgccc gtcaaaaacc tgaagcgcca ggatgccga
1081 atcatcgtgg gacttttcta tgagactgaa gcccggaaag ttttttgtga ggtgtacaag
1141 gagcgtctct ttgggaagaa gtacgtctgg ttcctcattg ggtggtatgc tgacaattgg
1201 ttcaagatct acgacccttc tatcaactgc acagtggatg agatgactga ggcggtggag
1261 ggccacatca caactgagat tgtcatgctg aatcctgcca ataccgcag catttccaac
1321 atgacatccc aggaatttgt ggagaaacta accaagcgac tgaagagaca ccctgaggag
1381 acaggaggct tccaggaggc accgctggcc tatgatgcca tctgggcctt ggcactggcc
1441 ctgaacaaga catctggagg aggcggccgt tctggtgtgc gcctggagga cttcaactac
1501 aacaaccaga ccattaccga ccaaacttac cgggcaatga actcttcgtc ctttgagggt
1561 gtctctggcc atgtggtgtt tgatgccagc ggctctcgga tggcatggac gcttatcgag
1621 cagcttcagg gtggcagcta caagaagatt ggctactatg acagcaccaa ggatgatctt
1681 tcctggtcca aaacagataa atggattgga ggggtcccccc cagctgacca gaccctggtc
1741 atcaagacat tccgcttcct gtcacagaaa ctctttatct ccgtctcagt tctctccagc
1801 ctgggcattg tcctagctgt tgtctgtctg tcctttaaca tctacaactc acatgtccgt
1861 tatatccaga actcacagcc caacctgaac aacctgactg ctgtgggctg ctactggct
1921 ttagctgctg tcttccccct ggggctcgat ggttaccaca ttgggaggaa ccagtttctt
1981 ttcgtctgcc aggcccgctt ctggctcctg ggcctgggct ttagtctggg ctacggttcc
2041 atgttcacca agatttggtg ggtccacacg gtcttcacaa agaaggaaga aaagaaggag
2101 tggaggaaga ctctggaacc ctggaagctg tatgccacag tgggcctgct ggtgggcatg
2161 gatgtcctca ctctcgccat ctggcagatc gtggaccctc tgcaccggac cattgagaca

```

FIG.6B-1

9/23

2221 tttgccaagg aggaacctaa ggaagatatt gacgtctcta ttctgccccca gctggagcat  
2281 tgcagctcca ggaagatgaa tacatggctt ggcattttct atggttaciaa ggggctgctg  
2341 ctgctgctgg gaatcttcct tgcttaygag accaagagtg tgtccactga gaagatcaat  
2401 gatcaccggg ctgtgggcat ggctatctac aatgtggcag tcctgtgcct catcactgct  
2461 cctgtcacca tgattctgtc cagccagcag gatgcagcct ttgcctttgc ctctcttgcc  
2521 atagttttct cctcctatat cactcttggt gtgctctttg tgcccaagat gcgcaggctg  
2581 atcacccgag gggaatggca gtcggaggcg caggacacca tgaagacagg gtcacgcacc  
2641 aacaacaacg aggaggagaa gtcccggctg ttggagaagg agaaccgtga actggaaaag  
2701 atcattgctg agaaagagga gcgtgtctct gaactgcgcc atcaactcca gtctcggcag  
2761 cagctccgct cccggcgcca cccaccgaca ccccagAAC cctctggggg cctgccccagg  
2821 ggaccccctg agccccccga ccggcttagc tgtgatggga gtcgagtga tttgctttat  
2881 aagtga

FIG.6B-2

10/23

1 atgctgctgc tgctgctggc gccactcttc ctccgcccc cgggcgcggg cggggcgcag  
61 acccccaacg ccacctcaga aggttgccag atcatacacc cgccctggga agggggcatc  
121 aggtaccggg gcctgactcg ggaccagggt aaggctatca acttcctgcc agtggactat  
181 gagattgagt atgtgtgccg gggggagcgc gaggtggtgg ggcccaaggt ccgcaagtgc  
241 ctggccaacg gctcctggac agatatggac acaccagcc gctgtgtccg aatctgctcc  
301 aagtcttatt tgaccctgga aaatgggaag gttttcctga cgggtgggga cctcccagct  
361 ctggacggag cccgggtgga tttccggtgt gaccccgact tccatctggt gggcagctcc  
421 cggagcatct gtagtcaggg ccagtggagc accccaagc cccactgcc aagtgaatcga  
481 acgccacact cagaacggcg cgcagtgtac atcggggcac tgtttcccat gagcgggggc  
541 tggccagggg gccaggcctg ccagcccgcg gtggagatgg cgctggagga cgtgaatagc  
601 cgcagggaca tcctgccgga ctatgagctc aagctcatcc accacgacag caagtgtgat  
661 ccaggccaag ccaccaagta cctatatgag ctgctctaca acgaccctat caagatcatc  
721 cttatgcctg gctgcagctc tgtctccacg ctggtggctg aggctgctag gatgtggaac  
781 ctcatgtgct tttcctatgg ctccagctca ccagccctgt caaaccggca gcgtttcccc  
841 actttcttcc gaacgcaccc atcagccaca ctccacaacc ctacccgcgt gaaactcttt  
901 gaaaagtggg gctggaagaa gattgctacc atccagcaga ccaactgaggt cttcacttcg  
961 actctggacg acctggagga acgagtgaag gaggtggaa ttgagattac tttccgccag  
1021 agtttcttct cagatccagc tgtgcccgtc aaaaacctga agcgccagga tgcccgaatc  
1081 atcgtgggac ttttctatga gactgaagcc cggaaagttt tttgtgaggt gtacaaggag  
1141 cgtctctttg ggaagaagta cgtctggttc ctcatgggt ggtatgctga caattggttc  
1201 aagatctacg acccttctat caactgcaca gtggatgaga tgactgaggc ggtggagggc  
1261 cacatcacia ctgagattgt catgctgaat cctgccataa cccgcagcat ttccaacatg  
1321 acatcccagg aatttgtgga gaaactaacc aagcgactga aaagacaccc tgaggagaca  
1381 ggaggcttcc aggaggcacc gctggcctat gatgccatct gggccttggc actggccctg  
1441 aacaagacat ctggaggagg cggccgttct ggtgtgcgcc tggaggactt caactacaac  
1501 aaccagacca ttaccgacca aatctaccgg gcaatgaact ctctgcctt tgagggtgtc  
1561 tctggccatg tgggtgttga tgccagcggc tctcggatgg catggacgct tatcgagcag  
1621 cctcagggtg gcagctacaa gaagattggc tactatgaca gcaccaagga tgatctttcc  
1681 tgggtccaaa cagataaatg gattggaggg tccccccag ctgaccagac cctggtcatc  
1741 aagacattcc gcttcctgtc acagaaactc tttatctccg tctcagttct ctccagcctg  
1801 ggcattgtcc tagctgttgt ctgtctgtcc ttaacatct acaactcaca tgtccgttat  
1861 atccagaact cacagcccaa cctgaacaac ctgactgctg tgggctgctc actggcttta  
1921 gctgctgtct tccccctggg gctcgatggg taccacattg ggaggaacca gtttcctttc  
1981 gtctgccagg cncgcctctg gctcctgggc ctgggcttta gtctgggcta cggttccatg  
2041 ttcaccaaga tttggtgggt ccacacgggc ttcacaaaga aggaagaaaa gaaggagtgg  
2101 aggaagactc tggaaccctg gaagctgtat gccacagtgg gcctgctggt gggcatggat  
2161 gtcctcactc tcgccatctg gcagatcgtg gaccctctgc accggaccat tgagacattt  
2221 gccaaggagg aacctaagga agatattgac gtctctattc tgccccagct ggagcattgc  
2281 agctccagga agatgaatac atggcttggc attttctatg gttacaaggg gctgctgctg

FIG. 7A

11/23

2341 ctgctgggaa tcttccttgc ttatgagacc aagagtgtgt ccactgagaa gatcaatgat  
2401 caccgggctg tgggcatggc tatctacaat gtggcagtc tgtgcctcat cactgctcct  
2461 gtcacatga ttctgtccag ccagcaggat gcagcctttg cctttgcctc tcttgccata  
2521 gttttctcct cctatatcac tcttgttgtg ctctttgtgc ccaagatgcg caggctgatc  
2581 acccgagggg aatggcagtc ggaggcgag gacacatga agacagggtc atcgaccaac  
2641 aacaacgagg aggagaagtc ccggctgttg gagaaggaga accgtgaact ggaaaagatc  
2701 attgctgaga aagaggagcg tgtctctgaa ctgcgccatc aactccagtc tcggcagcag  
2761 ctccgctccc ggcgccaccc accgacaccc ccagaaccct ctgggggcct gcccagggga  
2821 cccctgagc ccccgaccg gcttagctgt gatgggagtc gagtgcattt gctttataag  
2881 tgagggtagg gtgagggagg acaggccagt agggggaggg aaaggagag ggggaaggga  
2941 ggggactcag gaagcagggg gtcccatcc ccagctggga agaacatgct atccaatctc  
3001 atctcttgta aatacatgtc cccctgtgag ttctgggctg atttgggtct ctcatacctc  
3061 tgggaaacag acctttttct ctcttactgc ttcattgaat tttgtatcac ctcttcacaa  
3121 tttagttcgt acctggcttg aagctgctca ctgctcacac gctgcctcct cagcagcctc  
3181 actgcatctt tctcttccca tgcaacaccc tcttctagtt accacggcaa cccctgcagc  
3241 tcctctgcct ttgtgctctg ttctgtcca gcagggtct cccaacaagt gctctttcca  
3301 ccccaaaggg gcctctcctt ttctccactg tcataatctc ttccatctt acttgccctt  
3361 ctatactttc tcacatgtgg ctccccctga attttgcttc ctttgggagc tcattctttt  
3421 cgccaaggct cacatgctcc ttgcctctgc tctgtgcact cacgctcagc acacatgcat  
3481 cctccccctc cctgcgtgtg cccactgaac atgctcatgt gtacacacgc ttttcccgtg  
3541 tgctttcttc atgttcagtc acatgtgctc tcgggtgcc tgcattcaca gctacgtgtg  
3601 cccctctcat ggtcatgggt ctgcccttga gcgtgtttgg gtaggcatgt gcaatttgtc  
3661 tagcatgctg agtcatgtct ttctatattg cacacgtcca tgtttatcca tgtactttcc  
3721 ctgtgtaccc tccatgtacc ttgtgtactt tcttccctta aatcatggta ttcttctgac  
3781 agagccatat gtaccctacc ctgcacattg ttatgcactt ttccccaatt catgtttggg  
3841 ggggccatcc acacctctc cttgtcacag aatctccatt tctgctcaga ttcccccat  
3901 ctccattgca ttcatgtact accctcagtc tacactcaca atcatcttct cccaagactg  
3961 ctcccttttg ttttgtgttt ttttgagggg aattaaggaa aaataagtgg gggcaggttt  
4021 ggagagctgc ttccagtgga tagttgatga gaatcctgac caaaggaagg cacccttgac  
4081 tgttgggata gacagatgga cctatgggtt gggaggtggt gtccctttca cactgtggtg  
4141 tctcttgggg aaggatctcc ccgaatctca ataaaccagt gaacagtgtg actcggaaaa  
4201 aaaaaaaaaa aaaaaaaaaa

FIG. 7B

12/23

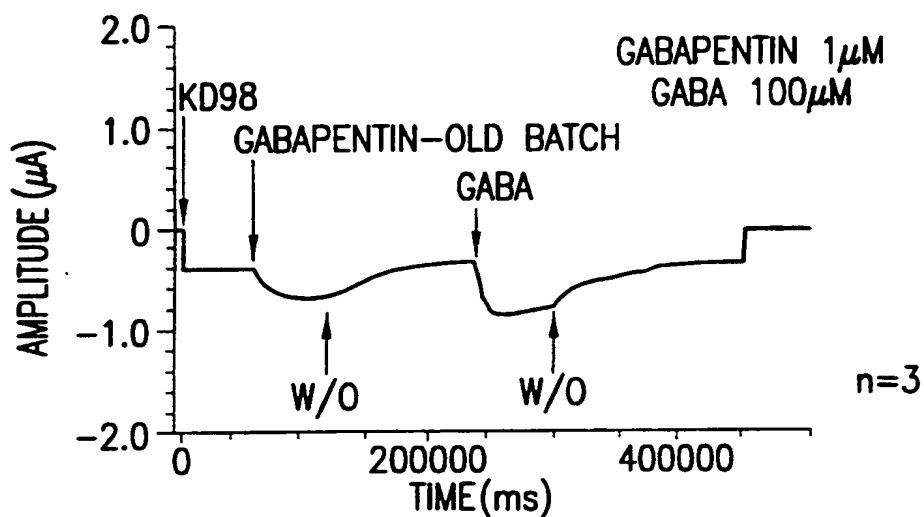
MFVRSSWLLWGTIVWASAEPTLHIGGTFPMESGGWGAGGACLPVEMALKDVNSRLDILPGYVLMNTNHNNSQ  
CQGLAMQQLYDFLYKPPTKMLLIGCSPVTTVIAEAPVWKLWLSYGGSSPALSNRNFPTLFRTHPSANMQNP  
TRIIMEKFKWKRFTILMSVEEVFTTAKDLEVSERKKGIKVDQSFYGDPTDAMKTLQRQDARIIVGLFYVTEAR  
KVLQAYHHGLYGRRYVWFFIGWYADTWYIPPEEHLNCTAEQMTAAEYHFTTESVMLS RDNIPAISEM TGMQFQ  
QRLTQYFQKDTANVGGFPEAPLAYDAVWALALAFNCTRNNLPSHIRENFYDNKVIAADTLFQCVKNTSFRGVSGK  
VMFSDSGDRIARTQIEQMGGKYKIMGYDYDTSGDLEWYNKEQLNGKGPDPSTVIKTFNSYSDFLIFSS TILQY  
FSQFLALLHVSSFTFLHKNIIFQSQPECNNILLIGCSCLFSLFLIGLPSDDISISESLFPLCHARVTILLFGFT  
FAYGSMFAKVIWHRMGATENQQLASRQPISSKFYVIVAALTAVDVFCVFWLIDPLHLTEQKFPLFADSEEDE  
MIMPVLQCCSQNQEVWIGIIMGFKCLLLVFGTFLSYETRNLKLRFINDSRFVGLAIYNVAVMTLVTAPVVTLLIH  
GKVDANFAFISLTSVLICTYISVGLIYGPKIRHIIKVPPSADEIQLNGNVGPGVMSKVDQKRYDMLKKE

FIG.8A

MNIFRRHGGIPLPLGVFTVQKEGFPDALPAIRTALSHVHSRSCILQYRLEMIVKOTHCKTSQGMKALFDLIA SRP  
RPVA I LGGQCTEVNEPIAMALKYWQIVQLSYAETHAMNGQLQFTTFFRVVPGSRNTNMAKCKFVNHFGWKRVGTV  
KQNDQPRYALVRDVR I ILVDVDEEMAATVLCAGYHRGMYGDNVYVWILPGYHSDRWLNQTHDNCTVEEMREAAKNHF  
SVEFALTRRDVDTKIVGNTVSPYVTLNLFQRAGDVWNEITQLDPNNTWRGYLYDGLWTLAIALSHSMGDNAEFSHH  
KMMEATDNSSFQGLTGKVKFANNERLGLVDIKQSDGQYVPFAVYDGADDEFKIIDSTTKGWSPLDSTITERRE  
HISSILFLAMSLALIGIFLALIFLLINFYRNHRFIKMSSPNLNNII IAGSICTFASVIMGLDTRIVSPDVFW  
LCYKWTWLCIGFTLSFGAMFSKTRVHSIFTNIRMDRKAIKDSKLF I ILGILLFIDICVLVTWAFVSPFSYTV EQ  
FKLIFSARRNIVIIPEVEKCNSSHSGVFQAVLYAVKGVLMI LGCFLAWETRHNVPALNDSKYIGTSVYCCVMS  
VLGLSTSVILQERVNEMFSLASFFVIFSTTLTLCLVFPKVRFELECCIGS

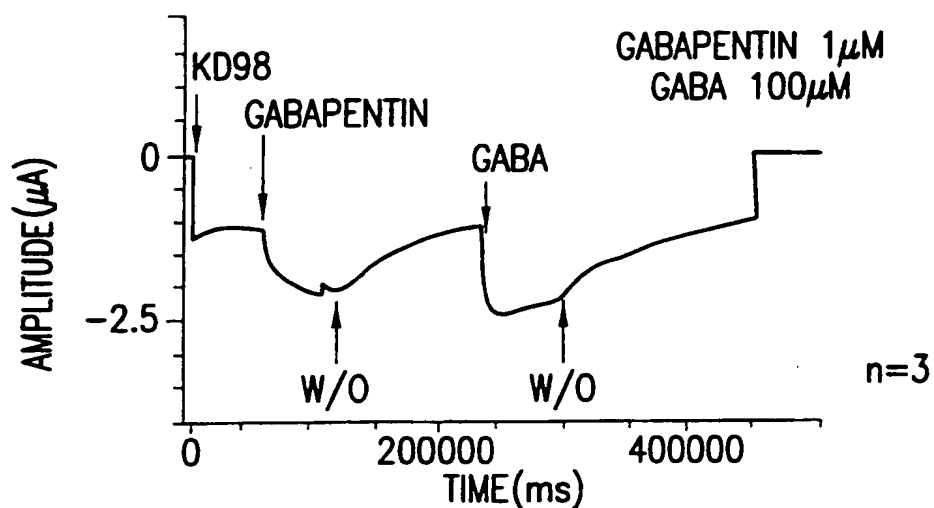
FIG.8B

13/23



99122015 DAT 1999/01/22 15:18:41 [00:16:00]

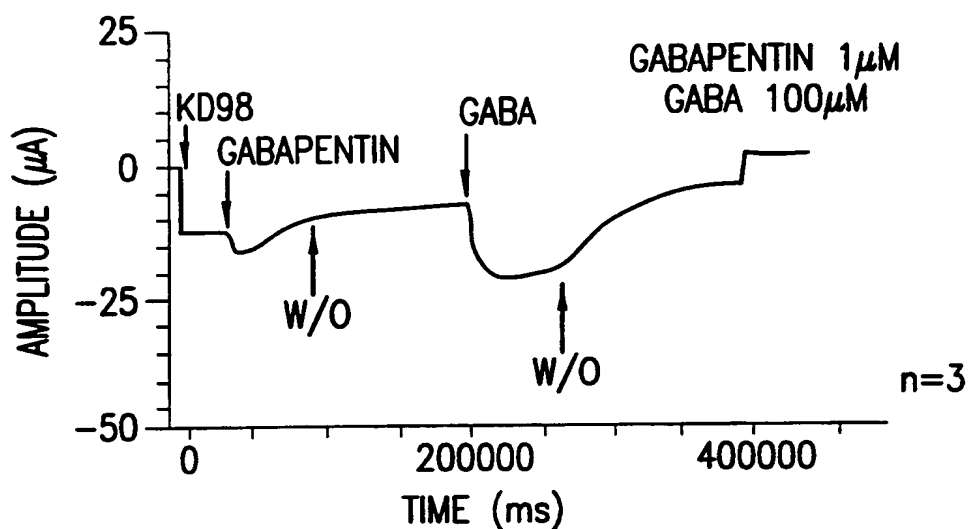
FIG.9A



99122021 DAT 1999/01/22 16:49:35 [00:32:42]

FIG.9B

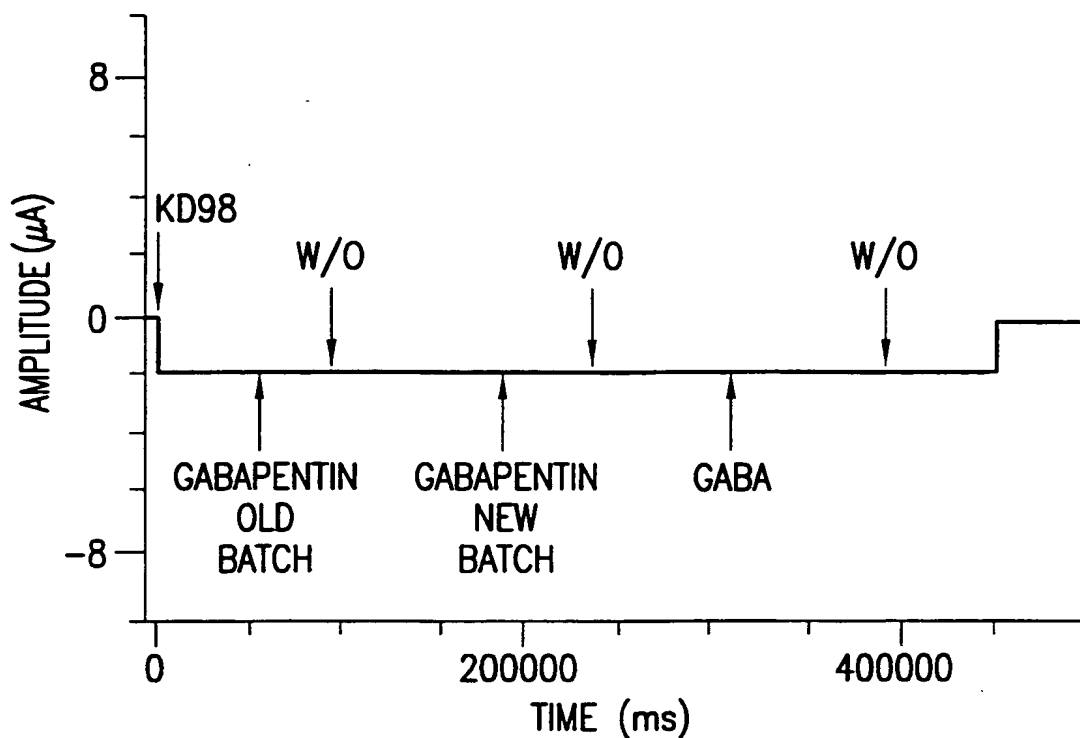
14/23



90224006 DAT 1999/02/24 09:16:10 [00:03:07]

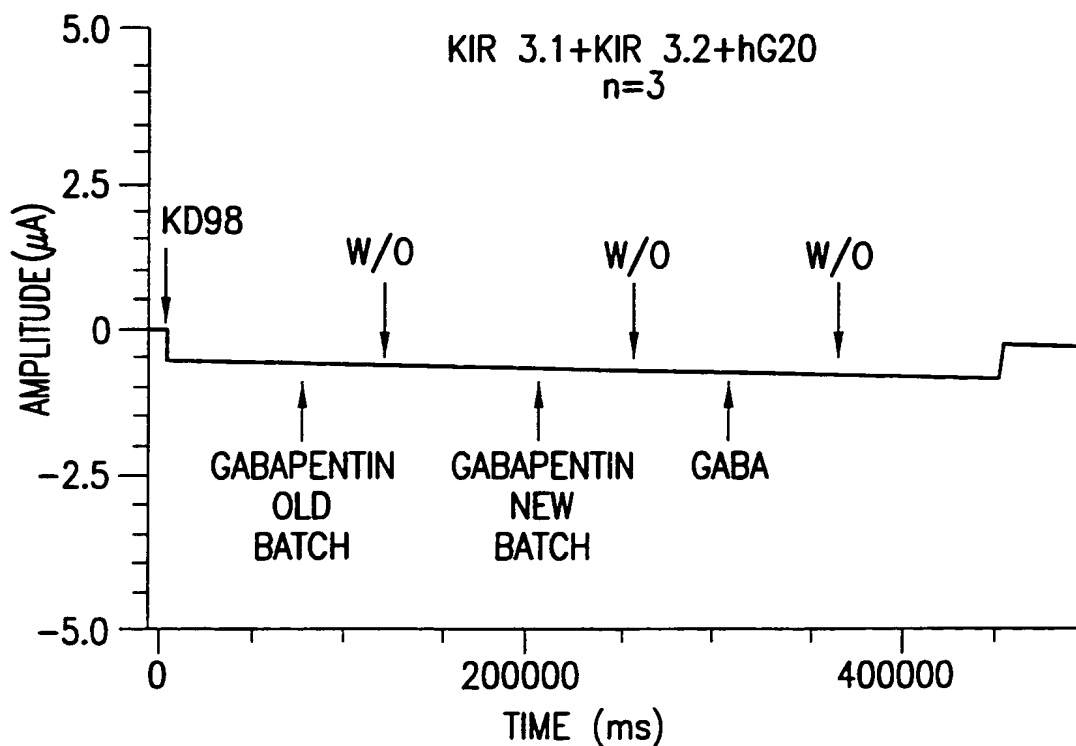
FIG.9C

15/23



99224016. DAT 1999/02/24 11:55:59 [00:04:09]

FIG.9D



99224020. DAT 1999/02/24 12:27:52 [00:04:35]

FIG.9E



16/23

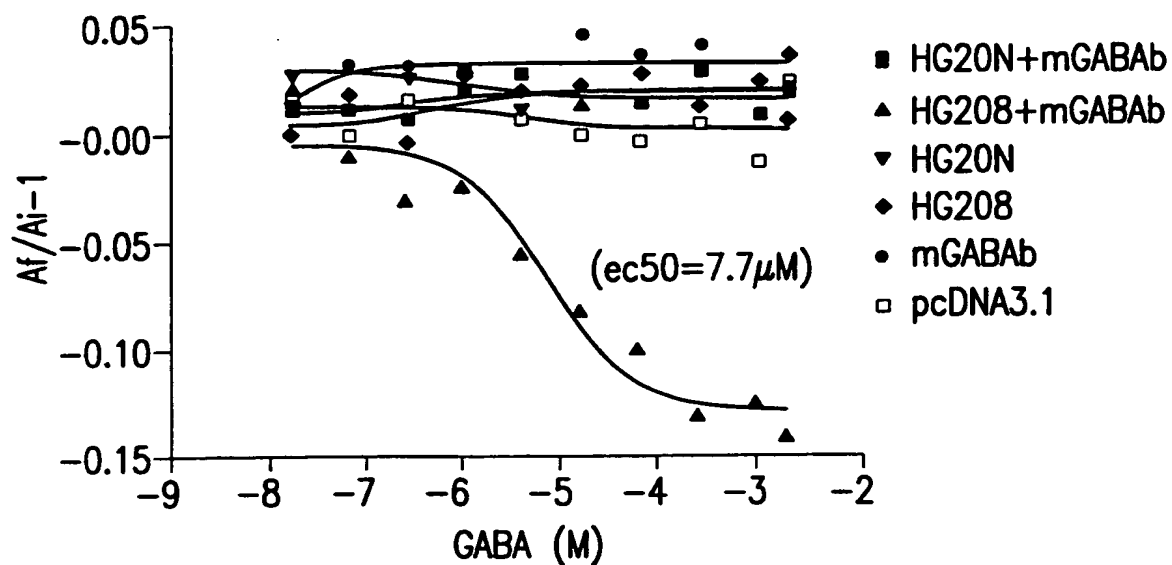


FIG.10A

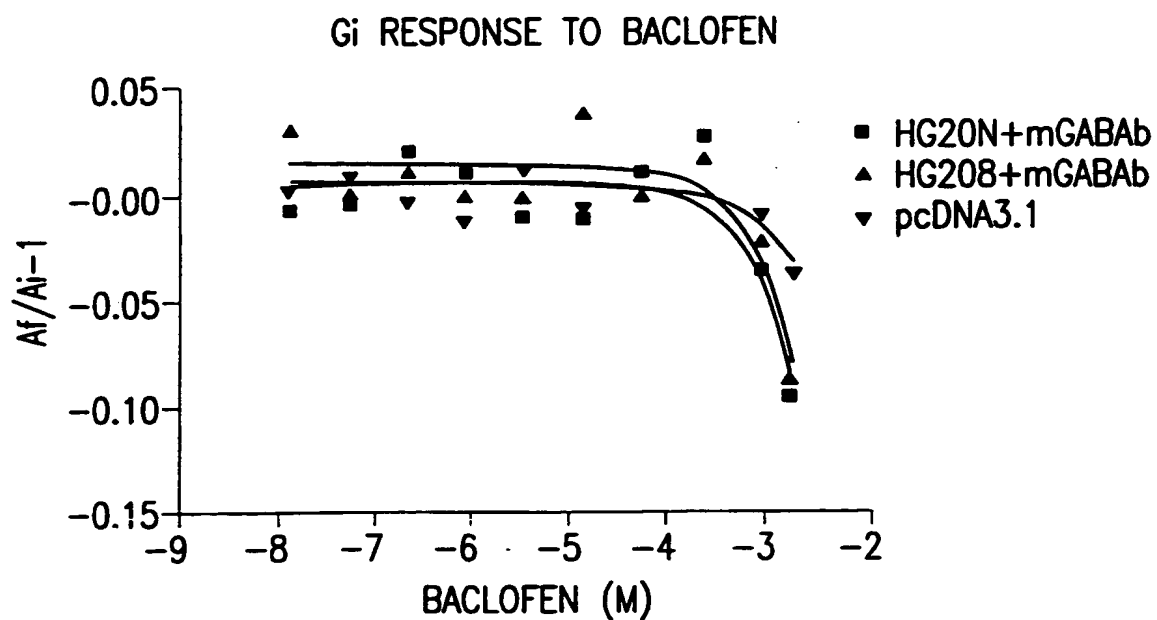
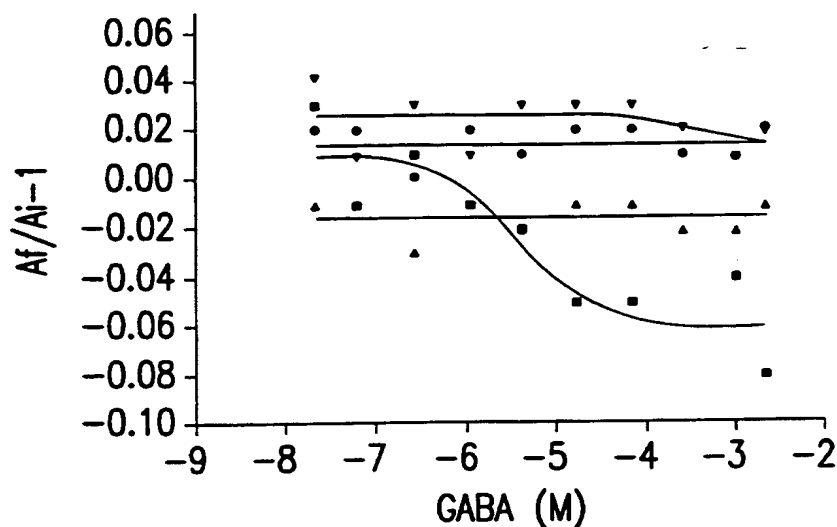


FIG.10B

17/23

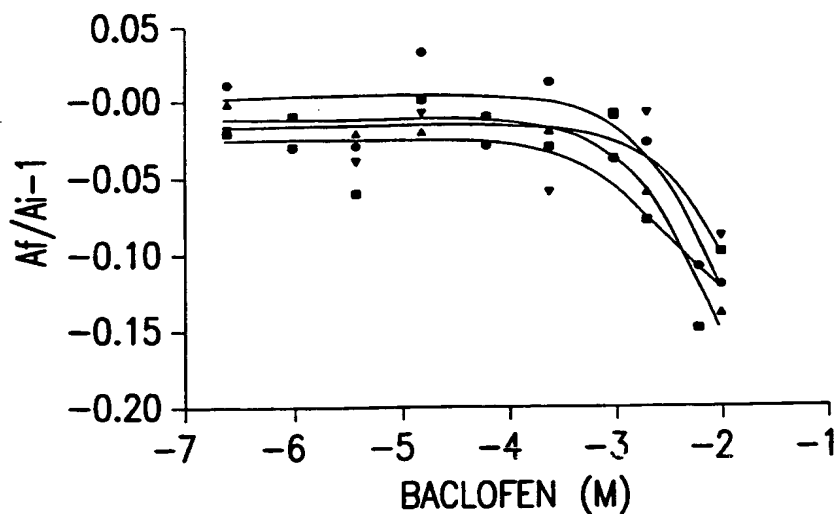


- HG208+mGABAb
- HG208+mGABAb+CGP
- pcDNA3.1
- HG208+mGABAb+CGP\*

\*CORRECTED DATA

EC50=3.6 $\mu$ M

FIG. 10C

HG208 +mGABAb Gi RESPONSE  
TO BACLOFEN+/-CGP 1 $\mu$ M

- HG208+mGABAb
- HG208+mGABAb+CGP
- pcDNA3.1
- pcDNA3.1+CGP

FIG. 10D

18/23

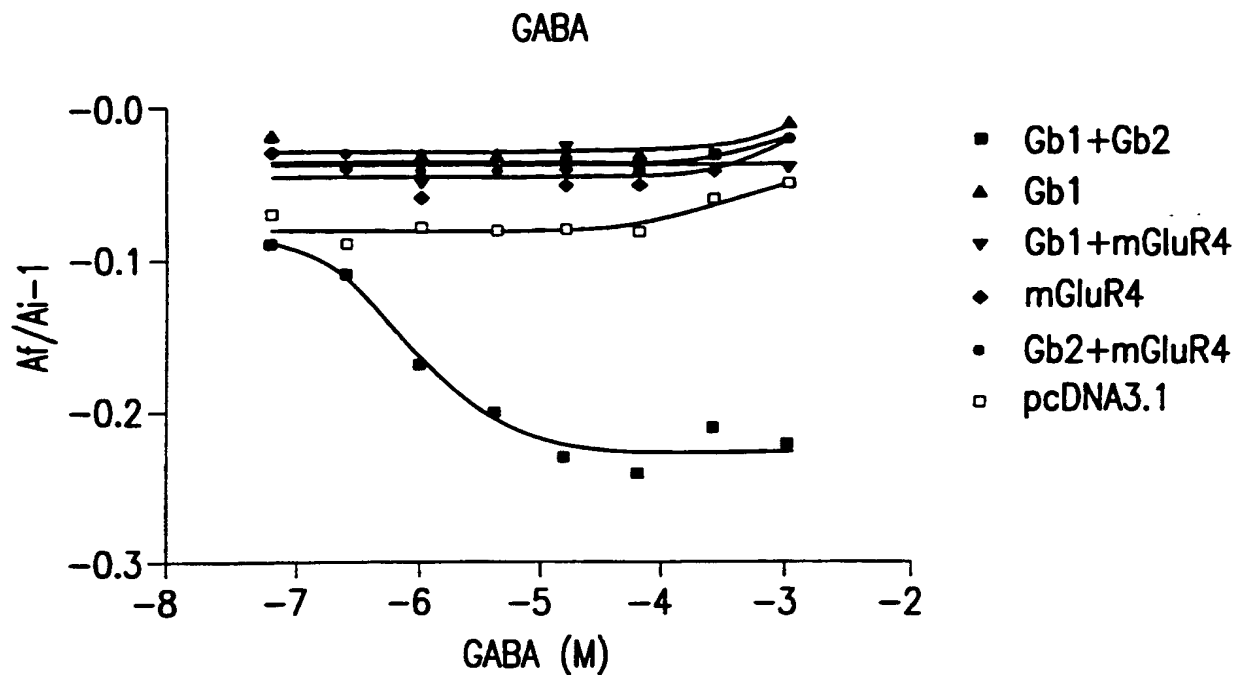


FIG.10E

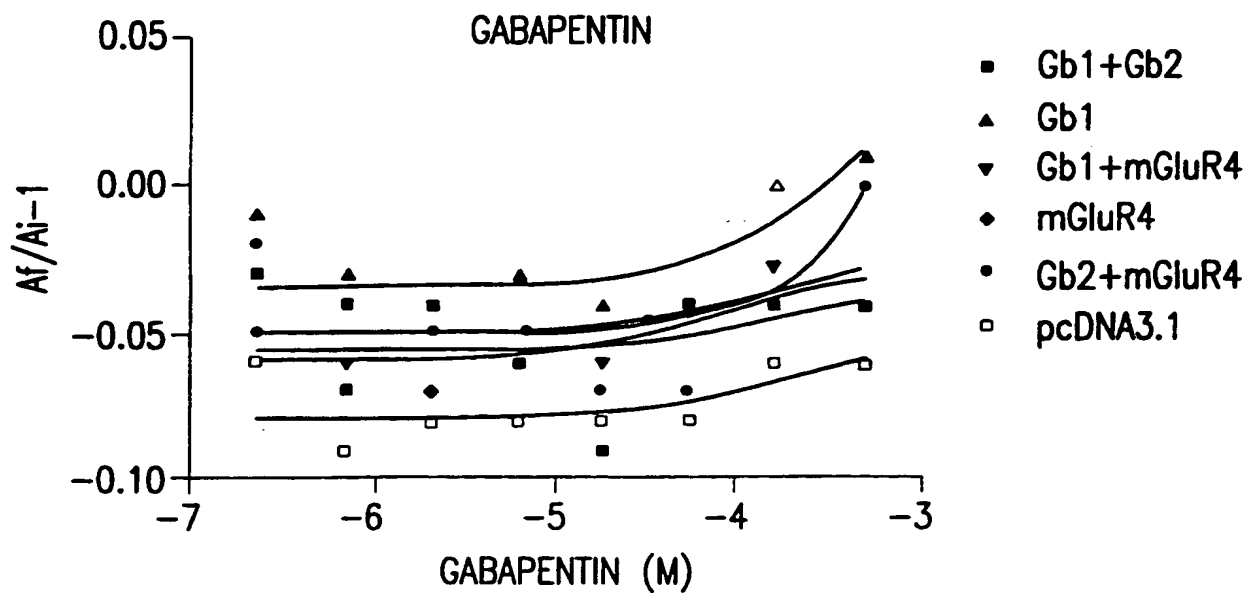
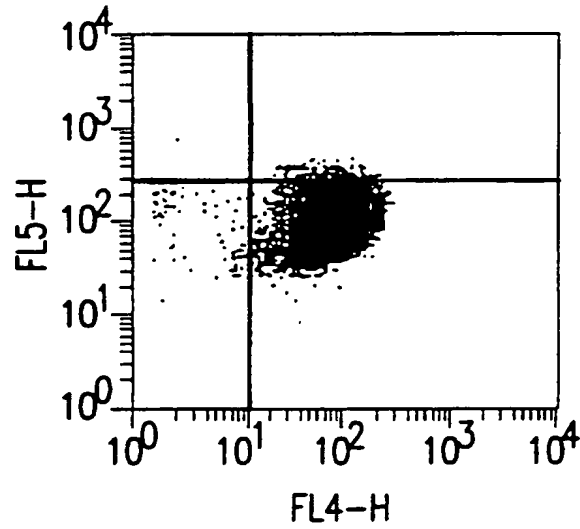


FIG.10F

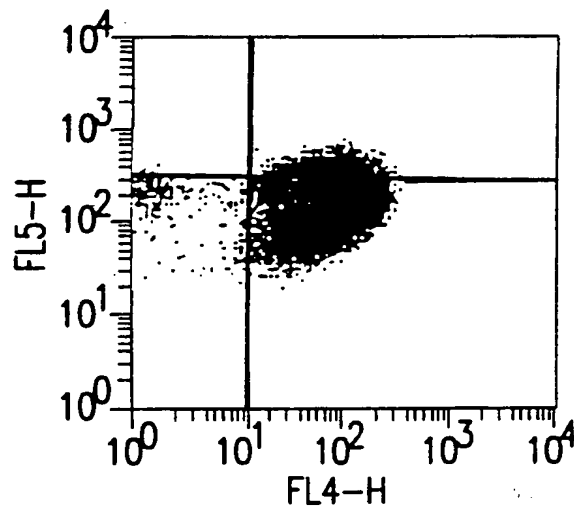
SUBSTITUTE SHEET (RULE 26)

19/23



QUAD	EVENTS	%GATED	%TOTAL
UL	1	0.00	0.00
UR	321	0.44	0.32
LL	91	0.12	0.00
LR	73362	99.44	73.38

FIG.11A



1  $\mu$ m FORSKOLIN

QUAD	EVENTS	%GATED	%TOTAL
UL	14	0.03	0.01
UR	6907	12.35	6.91
LL	285	.51	0.28
LR	48716	87.11	48.72

FIG.11B

SUBSTITUTE SHEET (RULE 26)

20/23

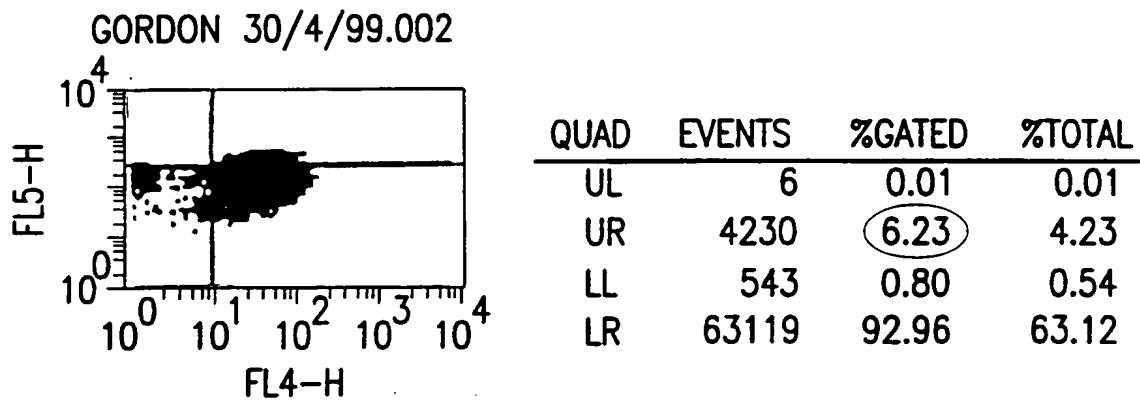


FIG.11C

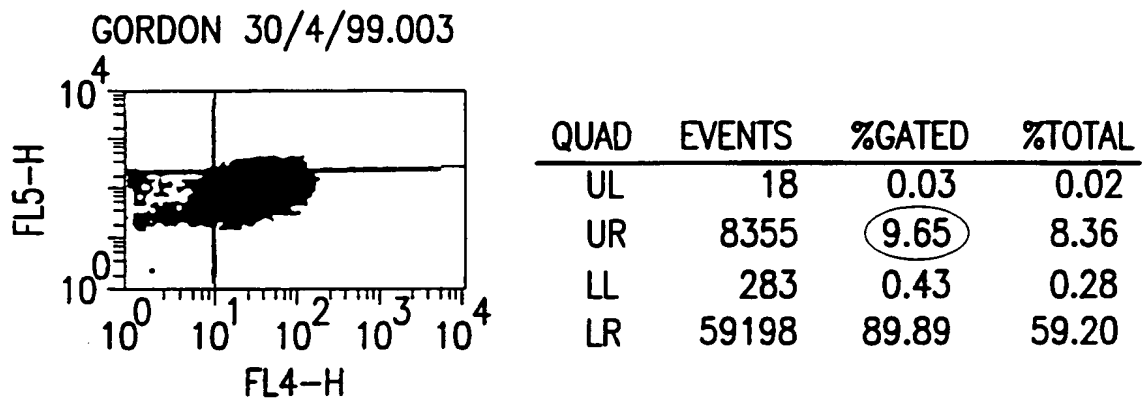
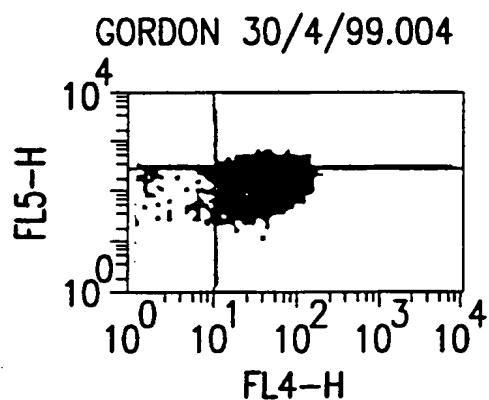


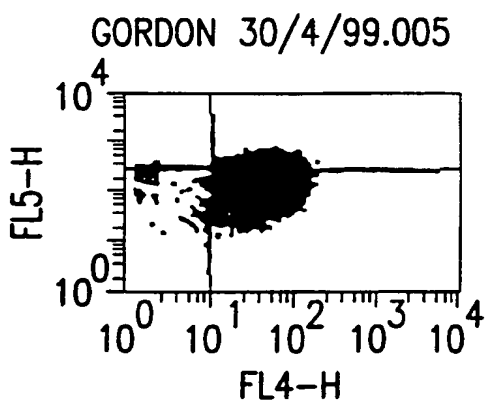
FIG.11D

21/23



QUAD	EVENTS	%GATED	%TOTAL
UL	3	0.00	0.00
UR	5795	7.98	5.80
LL	124	0.17	0.12
LR	66715	91.85	66.72

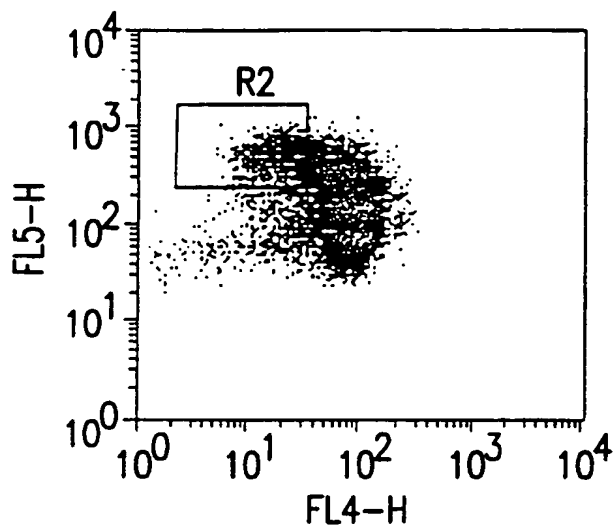
FIG.11E



QUAD	EVENTS	%GATED	%TOTAL
UL	2	0.00	0.00
UR	6601	9.38	6.60
LL	130	0.18	0.13
LR	63651	90.43	63.65

FIG.11F

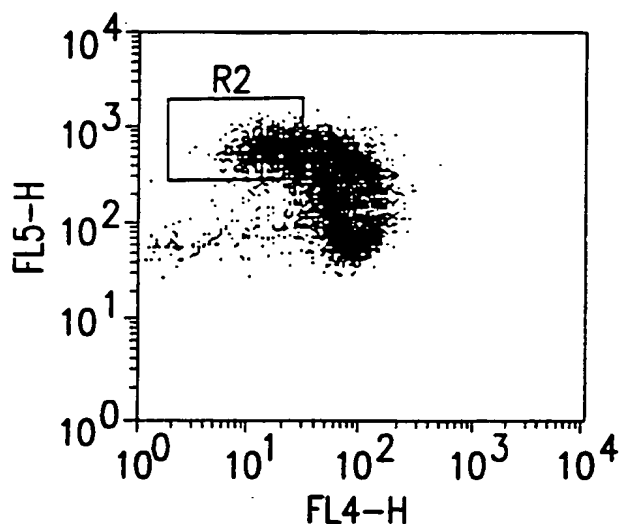
22 / 23



GATED EVENTS: 17691 TOTAL

REGION	EVENTS	%GATED	%TOTAL
R1	17691	100.00	35.38
R2	1171	6.62	2.34

FIG.12A

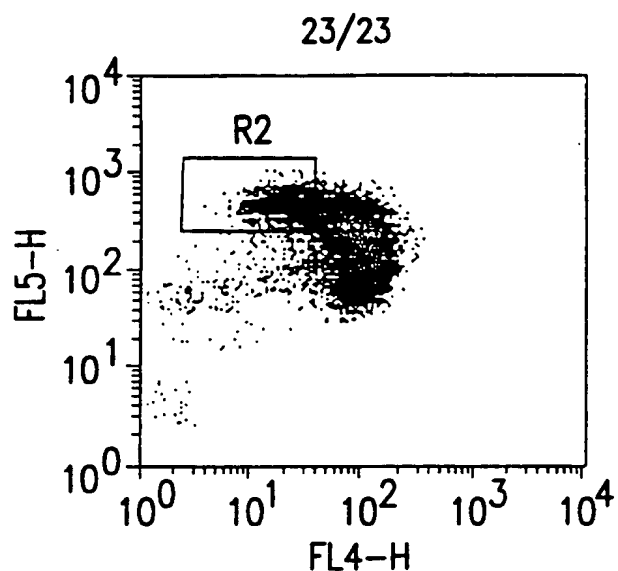


GATED EVENTS: 19589 TOTAL

REGION	EVENTS	%GATED	%TOTAL
R1	19589	100.00	39.18
R2	1859	9.49	3.72

FIG.12B

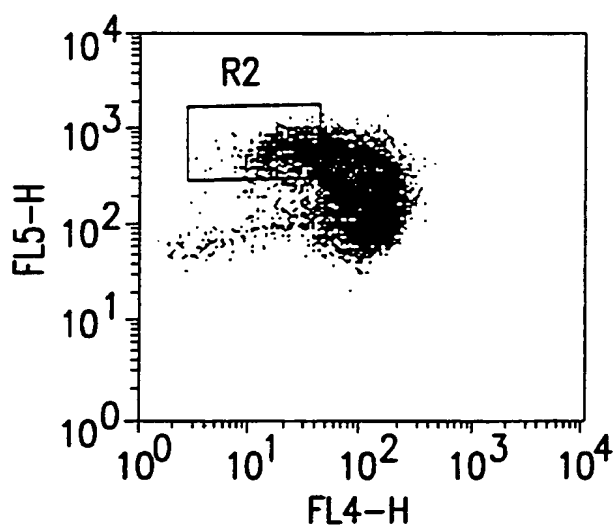
SUBSTITUTE SHEET (RULE 26)



GATED EVENTS: 19418      TOTAL

REGION	EVENTS	%GATED	%TOTAL
R1	19589	100.00	38.84
R2	1859	10.02	3.89

FIG.12C



GATED EVENTS: 18786      TOTAL

REGION	EVENTS	%GATED	%TOTAL
R1	18786	100.00	37.57
R2	1454	7.74	2.91

FIG.12D

SUBSTITUTE SHEET (RULE 26)